

## **REMARKS/ARGUMENTS**

Applicant thanks the Examiner for the thorough consideration given the present application. Claims 12-18 are pending in the present application. This Amendment amends claims 12, 15 and 16, and it adds new claims 19-22. The Examiner is respectfully requested to reconsider the rejection of claims 12-18 in view of the remarks set forth below.

### **A. The Claim Objections**

The Office Action has objected to the spelling of the word "signalling." Accordingly, the spelling of the word "signalling" in claim 12 has been amended to "signaling." The Examiner is respectfully requested to withdraw the objection.

### **B. The Rejection of Claims 15 and 16 Under 35 U.S.C. § 112**

The Office Action has rejected claims 15 and 16 under the provisions of 35 U.S.C. § 112, second paragraph, on the basis that the claim terms "the decision distances" and "said switching levels" have an insufficient antecedent basis. Accordingly, claims 15 and 16 have been amended, and the Examiner is respectfully requested to withdraw the rejection.

### **C. The Rejection of Claims 12-18 Under 35 U.S.C. §103**

The Office Action has rejected claims 12-14, 17 and 18 under the provisions of 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,259,928 (Vembu) in view of U.S. Patent 5,991,618 (Hall).

### **D. The Vembu Patent**

Vembu, the primary reference relied upon in the Office Action, discloses a system and method for optimizing power control which provides dynamic adjustment of a power-control threshold which is a function of the SNR. The threshold may be also be based upon a predetermined metric such as system error rate, number of frames with errors or BER. The transmitter power is reduced when signal quality is high.

It is respectfully submitted that the Vembu patent is cumulative of the prior art described at the top of page 2 of the present application. It is also respectfully submitted that the Vembu patent does not disclose multiple phy modes, because in Vembu, there is no suggestion that the modulation mode of a mobile unit is switched. Instead only the power level of the Vembu mobile is switched. Moreover, in Vembu the threshold is a function of the SNR, the number of frames received with errors or BER, and the threshold level is not a function of the power level of the peripheral station as claimed by the Applicant. In other words in Vembu, when the SNR of the signal received from the mobile falls below a certain threshold, the power level of the mobile is increased. In the Applicant's claimed invention, however, when the power level of the

signal received from the peripheral station falls below a power level threshold, then the modulation mode or phy mode of the peripheral station is switched to a different, more robust phy mode or modulation mode which provides an increased power level.

The Examiner readily concedes that in the Vembu patent there are additional missing features including "checking if the peripheral station has sufficient available transmission power in order to guarantee the transmission using the less robust phy mode." It is respectfully submitted that these features are not present in the Hall patent which is also relied upon by the Examiner to reject the pending claims.

#### **E. The Hall Patent**

The Hall patent discloses a wireless communications system, in which a subscriber unit transmit power level is determined by the subscriber unit and not a master unit. Thereafter, a power margin is determined by subtracting the subscriber unit transmit power from a maximum transmit power. Either the power margin or communication mode quality may be indicated at the subscriber unit, or reported to the infrastructure or master unit of the wireless communications system. In response to an unsatisfactory power margin or communication mode quality reported by the subscriber unit, the infrastructure may make adjustments to improve service. These adjustments include a change in the "data rate" and not a change in phy mode or modulation mode as claimed by the Applicant. It is respectfully submitted that Hall does not disclose

determining the power level of a peripheral unit at the master station and transmitting a message to the peripheral station as claimed by the Applicant.

#### **F. The Necessary Motivation To Combine References Is Missing**

It is respectfully submitted that one skilled in the art would not be motivated to combine the teachings of the Vembu patent with the Hall patent. There is simply no motivation described in the Office Action or in the references themselves to combine the cited references as suggested by the Examiner. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143 (Fed. Cir. 1985) ("When prior art references require selective combination by the court to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gleaned from the invention itself."). The Examiner has failed to show the motivation for combining the teachings of Vembu and, and the only possible motivation is gleaned from the hindsight provided by the Applicant.

#### **G. The Hypothetical Combination Is Not the Claimed Invention**

It is respectfully submitted that the combination of Vembu and Hall would not result in the applicant's claimed invention. More specifically, the Office Action states that the skilled artisan would modify the method Vembu with the teachings of Hall in order to check transmission power before switching modes. Even if the Office Action is correct, the hypothetical combination would not transmit a phy mode switching message

from the master station in case the received power level reaches either a lower or a higher switching threshold associated with each phy mode used by the peripheral station for its transmissions". Instead, the hypothetical combination would provide a power level determination at the subscriber unit and transmit it to the master unit which is directly contrary to the teachings of the present application. Moreover, the power level determination would be used to switch the data rates and not switch the phy modes as claimed by the Applicant. Accordingly, it is respectfully submitted that the Examiner's hypothetical combination is not the claimed invention of claim 12, and the rejection based upon 35 U.S.C. §103(a) must be withdrawn.

#### **H. Dependent Claims 13-18**

The Applicant believes that dependent claims 13-22 are allowable over the prior art for at least the same reasons as independent claim 12 from which they depend. Moreover, it is respectfully submitted that new claims 18-22 are directed to different types of quadrature modulation that are not disclosed in either Vembu or Hall and are further patentable over these references.

#### **I. Conclusion**


Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Richard J. McGrath (Reg.

No. 29,195) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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